



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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November 8, 2010

Scott Nicholson  
Office of Water Project Review  
Planning and Policy Division  
U.S. Army Corps of Engineers  
Washington, DC 20002

**Subject: Comments on the Final Integrated Feasibility Report and the Final Environmental Impact Statement (FEIS) for the Surf City and North Topsail Beach Project To Evaluate Coastal Storm Damage Reduction, Topsail Island, Pender and Onslow Counties, North Carolina**  
**FEIS Filed Date: 09/30/2010; CEQ Federal Register Date: 10/08/2010**  
**CEQ Number: 20100391; ERP Number: COE-E39079-NC**

Dear Mr. Nicholson:

Pursuant to Section 309 of the Clean Air Act (CAA) and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA) Region 4 has reviewed the combined Final Integrated Feasibility Report and Final Environmental Impact Statement (FEIS) for the proposed Coastal Storm Damage Reduction Project for Surf City and North Topsail Beach, North Carolina, which we received on 10/4/2010. The combined report was issued by the Wilmington District of the U.S. Army Corps of Engineers (Corps), and was intended to comply with the National Environmental Policy Act (NEPA), and therefore a separate EIS was not provided. The final document that we were provided has been termed "a fully-integrated report" that is intended to comply with all NEPA requirements, as well as the requirements of the Corps (and Federal) water resources planning process. EPA previously provided a comment letter on 2/24/2010 to the Wilmington District Project Manager (Mr. Glenn McIntosh) regarding the Draft version of the Integrated Feasibility Report and the Draft EIS (DEIS: CEQ Number: 20100010, ERP Number COE-E39079-NC).

EPA understands that the Wilmington District conducted a Civil Works Review Board (CWRB) with Corps Headquarters on 8/27/2010. The main purpose of the CWRB was to gain approval from HQ for release of the Final Integrated Feasibility Report and FEIS for Agency and Public review. We further understand that the purpose of the

combined Final Integrated Feasibility Report and FEIS is to evaluate coastal storm damage reduction for the Towns of Surf City and North Topsail Beach, NC, and then “develop the most suitable plan of damage reduction for the present and future conditions” for the selected 50-year period of analysis. Topsail Island is on the southeastern North Carolina coast, and (from south to north) the three towns on the island are Topsail Beach, Surf City and North Topsail Beach. The primary study area for the report we reviewed includes the towns of Surf City and North Topsail Beach and the associated nearby borrow sites. We understand that this report was authorized by two U.S. House Committee on Transportation and Infrastructure resolutions dated February 16, 2000 and April 11, 2000, and that a General Reevaluation Report has recently been completed for the Town of Topsail Beach under a separate authority.

The Wilmington District study team appropriately included representatives of Federal, State, and local governments, in an effort “to identify cost-effective and environmentally- and technically-sound alternatives to reduce damages within the two towns, and to the adjacent shoreline.” The process integrated the Corps’ “Campaign Plan” in all aspects of the study process, and “in particular, the study meets Goal 2 of the Campaign Plan, which is to deliver enduring and essential water resource solutions through collaboration with partners and stakeholders.” The study effort ultimately identified a National Economic Development (NED) plan, which the Corps hopes will maximize net benefits through reduction of future storm damages. EPA understands that the Corps’ recommended plan of action is construction of the NED Plan. The study we reviewed discloses what the Corps believes to be the most practicable plan of damage reduction for the primary study area: a berm and dune project along approximately 10 miles of the oceanfront. The southern limit of the project is the boundary between Topsail Beach and Surf City, and the northern limit is within North Topsail Beach at the southern edge of the Coastal Barrier Resources System (Topsail Unit, L06).

The final report appropriately included a stated “purpose and need” for the project, to include the “reduction of damages associated with coastal storm events and beach erosion,” as well as “enhancing the beach strand available for recreation use and providing needed habitat for a variety of plants and animals.” The final report also appropriately included an analysis of various measures and plans, and then recommended selection of the plan with the highest net benefits while determining that the improvement is justified under current planning criteria and policies. The selected NED Plan consists of a sand dune system constructed to an elevation of 15 feet above the National Geodetic Vertical Datum (NGVD), fronted by a 50-foot wide beach berm constructed to an elevation of 7 feet above NGVD, with the berm and dune extending along a reach of 52,150 feet in length (about 10 miles). This plan is identified among the other alternatives as “Plan 1550.”

EPA understands that the report followed detailed guidance provided in the U.S. Army Corps of Engineers Planning Guidance Notebook (Engineer Regulation 1105-2-100) for studies of water and related land resources. This guidance is “based upon the Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies that were developed pursuant to Section 103 of the

Water Resources Planning Act (P.L. 89-80) and Executive Order 11747, which were approved by the U.S. Water Resources Council in 1982 and by the President in 1983.” EPA notes that the final report also references a number of prior studies conducted in the Topsail Island area, including engineering, planning, and environmental reports. These studies have addressed coastal storm damage reduction as well as navigational needs.

An economic analysis was appropriately conducted as part of the study, and a Benefit/Cost Ratio has been calculated ( $BCR = 3.5$  to 1) for the recommended plan (based upon October 2010 price levels). First costs of the project are currently estimated at \$127,973,000, and renourishment costs at 6-year intervals are estimated at \$30,612,000. Expected annual costs are estimated at \$11,585,000, with expected annual benefits estimated at \$40,779,000 of which \$17,275,000 are coastal storm damage reduction benefits, \$20,505,000 are recreation benefits, and \$2,999,000 are benefits during construction. The baseline cost estimate for construction in fiscal year (FY) 2015 is \$133,255,000, and details on first costs, annual costs, annual and net benefits, and benefit cost ratios made at October 2010 price levels are shown in the final report.

The following are EPA’s draft version comments and follow-up FEIS comments to updated information found in the Final Integrated Feasibility Report/Final EIS:

➤ EPA noted in our 2/24/2010 DEIS comment letter that we were at that time reviewing the Final Environmental Impact Statement (FEIS) for the proposed project adjacent to this one, known officially as the "Relocation of New River Inlet Ebb Tide Channel Between North Topsail Beach and Onslow Beach, and the Placement of the Dredged Material Along the Ocean Shoreline of North Topsail Beach in Onslow County, NC." The Corps has responded in this FEIS that our review has been acknowledged and that no change is required. EPA has since completed our review of the FEIS for the adjacent project and we sent our comments to Wilmington District Project Manager Mickey Sugg on 3/5/2010. A copy of those comments is included with this transmittal for your reference.

➤ EPA noted in our 2/24/2010 DEIS comment letter that the Sponsors have reportedly agreed to provide public access and parking in accordance with Corps guidelines as public funds are being expended. We understand that public access and parking will be installed at “intervals of no more than a half mile, throughout Surf City and the reach of North Topsail Beach benefitted by the cost-shared project.” EPA recommended that the FEIS include an excerpt(s) from the Corps guidelines about public access and parking to ensure that the project interval “of no more than a half mile” meets these guidelines. The Corps reported in the FEIS that the Guidance simply states that parking should be available within a “reasonable walking distance of the beach” and should be sufficient to “accommodate the lesser of the peak hour demand or the beach capacity”. We understand that the “half mile” guidelines were established by Wilmington District in coordination with the South Atlantic Division (SAD). EPA recommends that the Record of Decision (ROD) include information on whether the “no more than a half mile” standard for spacing is the same for all coastal Corps districts in SAD.

➤ EPA noted in our 2/24/2010 DEIS comment letter that the Council on Environmental Quality (CEQ) regulations (40 CFR 1502.15) require an EIS to describe the environment of the areas to be affected (or created) by the alternatives under consideration. The data and analysis in the DEIS were generally found to be commensurate with the importance of the impacts, although EPA still had some general concerns about the potential impacts from use of a hopper dredge on marine threatened and endangered resources (e.g., such as the potential for entrainment of sea turtles associated with hopper dredges). EPA had specific concerns about the project's impacts to the green sea turtle, loggerhead sea turtle, Kemp's ridley sea turtle, and the leatherback sea turtle, which are all known to nest in the project vicinity. These species could be affected by initial project construction and periodic renourishment, and the sea turtles that occur in offshore waters may be affected by hopper dredges. EPA strongly recommended initial construction and periodic renourishment activities not be conducted during the sea turtle nesting season. Further, EPA recommended that hopper dredging not be conducted during months when water temperatures are warm and the various turtle species may be present. The FEIS acknowledges our DEIS comments related to the project's impacts on turtles, and included information in Section 3.02.4 of Appendix I (Biological Assessment) that discusses in detail the potential impacts of the proposed action on nesting and in-water sea turtles, proposed commitments to reduce impacts, and subsequent effect determination. EPA notes that Section 4.00 of the FEIS ("Commitments To Reduce Impacts To Listed Species") includes specific commitments to avoid the sea turtle nesting season. EPA appreciates the inclusion of these detailed sections in the FEIS. Our only comment on the FEIS related to this topic is that we recommend that the USFWS compaction measurement guidelines be carefully followed, in particular those related to the compaction measurement of 500 PSI establishing the maximum level of beach hardness and determining when post-nourishment beach tilling should be done to reduce the shear resistance.

➤ EPA noted in our 2/24/2010 DEIS comment letter that we continue to have concerns about the project's impacts to the piping plover, which has been documented to feed along the 10-mile project reach. During the winter months the piping plover has been documented to be found in the surf zone. EPA strongly recommended the development and implementation of stringent construction criteria to ensure that the project does not affect the piping plover's foraging activities on the beach. EPA noted that we are particularly concerned that the piping plover's beach food resources may be affected by beachfill operations. The FEIS acknowledges our DEIS comments and includes in the FEIS the Section 3.02.8 of Appendix I (Biological Assessment), which provides a detailed discussion of the potential impacts of the proposed action on piping plovers and their foraging activities and subsequent effect determination. EPA concurs that beach placement of sand for this project during initial construction (and each periodic nourishment interval) should be scheduled to avoid the breeding and nesting season as well as peak recruitment periods for benthic invertebrate forage base. EPA concurs that the long-term effects of the project may restore lost roosting and nesting habitat through the addition of beach fill, and we recommend that the Corps seek to minimize the short-term impacts to foraging, sheltering, roosting habitat that occur during project construction.

➤ EPA recommended in our 2/24/2010 DEIS comment letter that the U.S. Fish and Wildlife Service and the National Marine Fisheries Service review and provide recent concurrence letters (to be included in the FEIS) regarding the adequacy of the Biological Assessment (BA) developed for this project pursuant to Section 7 (of the Endangered Species Act of 1973) and presented with the draft report. The FEIS notes that Corps concurs with our recommendation, and we understand that USFWS and NMFS have reviewed the draft report and have provided their concurrence letters regarding the adequacy of the BA pursuant to Section 7 of the ESA. Specifically, the USFWS has indicated that “overall, based on the information provided in the DEIS and BA, the USFWS believes that the proposed action is not likely to adversely affect federally listed species or their critical habitat as defined by the ESA of 1973, as amended. Therefore, the requirements of Section 7 (a)(2) of the ESA have been satisfied.” The NMFS also reportedly agrees with the Corps’ determination that the proposed beach renourishment action, consisting (in part) of utilizing hopper dredges to mine offshore sand sources for deposition of sand onto North Carolina beaches (a 17-mile section extending from Topsail Beach/Surf City town limits to the northern end of Topsail Island) falls under the authority of the current NMFS South Atlantic Regional Biological Opinion (SARBO) on hopper dredging of navigation channels and borrow areas in the southeastern United States, dated 9/25/1997. EPA understands that the SARBO is in the process of being revised and will eventually supersede the current opinion. EPA recommends that the Corps abide by the revised SARBO when it is ultimately issued, and we understand that sea turtle or shortnose sturgeon takes resulting from the proposed dredging action are authorized if conducted under the SARBO, and will be counted against the take limit as set forth in the SARBO.

➤ EPA noted in our 2/24/2010 DEIS comment letter that we were reviewing the FEIS for the adjacent project known as the “Relocation of New River Inlet Ebb Tide Channel Between North Topsail Beach and Onslow Beach, and the Placement of the Dredged Material Along the Ocean Shoreline of North Topsail Beach in Onslow County, NC.” That FEIS describes a plan by the Town of North Topsail Beach to develop a non-Federal coastal storm damage reduction project for the parts of the town that lie within the Coastal Barrier Resources System (Topsail Unit, L06). EPA recommended careful coordination between the two projects to ensure that there are no conflicts between the Federal and non-Federal projects, either on the shoreline or in the borrow areas. EPA noted that the Corps has committed that, in the event that the non-Federal project is not in place when the Federal project begins, then the northern 2,000 ft of the dune and berm system would be replaced with a transition section. We asked that the FEIS include specific engineering details about what this 2,000 ft transition section would look like and how it would affect the overall NED Plan. The FEIS notes the Corps concurs with our recommendation for coordination between the two projects “to ensure that there are no conflicts between the Federal and non-Federal projects, either on the shoreline or in the borrow areas.” EPA notes that the Corps did not provide specific engineering and design details about the transition section in the FEIS, as these are reportedly not to be completed “until the PED (Pre-Construction Engineering and Design) phase of the

study.” EPA requests that a copy of these transition section details be provided to us when they are complete.

➤ EPA noted in our 2/24/2010 DEIS comment letter that an Agency Technical Review (ATR) was to be conducted in accordance with the Corps’ “Peer Review of Decision Documents” process, meaning the proposed project would be reviewed by Corps staff outside the originating office, conducted by a “regional and national team of experts in the field, and coordinated by the National Planning Center of Expertise in Coastal Storm Damage Reduction, North Atlantic Division, U.S. Army Corps of Engineers.” EPA recommended that the FEIS include all comments and responses developed as part of the ATR process. The Corps has apparently decided to withhold the ATR comments from inclusion in the FEIS, as “the Corps does not believe it will add to the report to include these comments with the report.” EPA disagrees with this decision to withhold these comments, particularly since these comments were made by a regional and national team of federal experts in the field of storm damage reduction. We believe publishing these would have added significant value to the FEIS. Both EPA and the Public have significant interest in the ATR’s expert comments on this federally funded project, and in the spirit of complete disclosure required by NEPA, both these comments and the Corps’ responses should have been included as an appendix to the FEIS.

➤ EPA noted in our 2/24/2010 DEIS comment letter that an “Independent External Peer Review” (IEPR) was to be conducted (following the ATR) by a “non-USACE national team of experts in the field, and coordinated by the National Planning Center of Expertise in Coastal Storm Damage Reduction, North Atlantic Division, U.S. Army Corps of Engineers.” EPA recommended that the FEIS include all comments and responses developed as part of the IEPR process. The FEIS states that the “IEPR comments and USACE responses are made public separately from the publication of the FEIS.” As these are part of the NEPA process, EPA recommends that both the IEPR and the ATR comments and Corps responses be included as appendices to the ROD.

➤ EPA noted in our 2/24/2010 DEIS comment letter that CEQ regulations (40 CFR 1502.14(a)) require that an EIS “rigorously explore and objectively evaluate all reasonable alternatives” for a proposed action. The regulations (40 CFR 1502.14(b)) further require that substantial treatment be made of each alternative considered in detail, including the proposed action. The draft report appropriately notes that study team considered both structural and non-structural measures. EPA recommended that the FEIS include complete details on the nonstructural measures that were considered, such as removal and relocation, as well as final summaries of the economic analyses (using recent economic data) that found these nonstructural measures to have greater costs than benefits. The Corps concurred with our recommendation, and we noted that details on the non-structural analysis were provided in Appendix P of the FEIS.

➤ EPA noted in our 2/24/2010 DEIS comment letter that the DEIS appropriately assessed project risk, uncertainty, and consequences, and generally described these with sufficient detail so that that “decisions can be made with knowledge of the degree of reliability of the estimated benefits and costs and of the effectiveness of alternative

plans.” EPA concurs that all recommendations made in the FEIS should be capable of being implemented through adaptive management should future conditions warrant such. EPA concurs that “renourishment may be needed more often or less often, depending on the occurrence of large storms and accompanying erosion.”

➤ EPA noted in our 2/24/2010 DEIS comment letter that to avoid conflicts, the project should be coordinated with monitoring efforts led by the North Carolina Recreational Water Quality Program (NCRWQ), which regularly tests these coastal waters in order to protect public health by monitoring and notifying the public when bacteriological standards for safe bodily contact are exceeded. EPA also recommended that the project should be coordinated with the North Carolina Department of Environmental and Natural Resources, Division of Environmental Health, Shellfish Sanitation Section, which is also continually monitoring and classifying these coastal waters as to their suitability for shellfish harvesting for human consumption. The FEIS concurs and states that prior to commencement of construction activities, the Corps will coordinate with the NCWRQ as well as the NCDENR, shellfish sanitation section, and that “appropriate requirements will be incorporated into the project plans and specifications.”

➤ EPA noted in our 2/24/2010 DEIS comment letter that the main channel of the Atlantic Intracoastal Waterway (AIWW) in North Carolina has been maintained by dredging for over 70 years to remove shoals that periodically develop. Some of the dredged material removed during maintenance activities is reported to be high quality beach sand. This material has been placed directly on nearby ocean beaches, or stockpiled in confined disposal areas near the shoreline of the AIWW. Other area sand sources are from dredging activities in the New Topsail Inlet and Connecting Channels, as well as the New River Inlet. EPA recommended that these sand sources be considered for renourishment activities for the 10-mile long project reach. The FEIS responded that “material available from the AIWW would be a very small amount compared to the size of the project, and would not be cost-effective for placement on Surf City/North Topsail Beach.” EPA notes that information about this has been added to section 5.06.3 of the FEIS (“Borrow Site Comparisons”).

➤ EPA recommended in our 2/24/2010 DEIS comment letter that the FEIS should include complete supporting geotechnical information, especially representative boring logs and/or grain size analysis plots from soil borings conducted in the finalized borrow areas. EPA notes that details on geotechnical information were included in Appendix C of the FEIS.

➤ EPA recommends in our 2/24/2010 DEIS comment letter that that areas with extensive hard bottom area and/or relatively low volumes of beach compatible material be ruled out as potential sources of borrow material for this project, and that final selection of borrow areas should be based upon high volumes of accessible, beach quality sands. We recommended rigorous delineation of all hard bottom resources within each prospective borrow area before commencement of work in order to avoid potential impacts to hard bottom resources (particularly from hopper dredging activities). The

State of North Carolina's hard bottom buffer rule language requires that dredging should not be conducted "on or within 500 meters of significant biological communities, such as high relief hard bottom areas." EPA supports the Corps' efforts to use divers to conduct ground truth confirmation in the potential borrow areas, as well as collecting sediment samples, conducting video documentation, and employing sidescan technology, all for the purpose of assisting with hardbottom avoidance. EPA concurs with the inclusion in the FEIS the statement that "during the planning process borrow areas with extensive hard bottom and/or relatively low volumes of beach compatible material were ruled out as potential sources of borrow material for this project. Specifically, borrow areas I, K, M, and R were excluded as noted in Figure A-1 of the report. Additional borrow area refinement will occur during the PED stage of the study." EPA notes that specific discussion of hard bottom within the proposed borrow areas as well as potential impacts and associated buffers and avoidance measures are discussed in Sections 2.01.10 and 8.01.8.2 of the report. EPA notes that Section 2.01.10 of the FEIS includes information on the geophysical investigation that was conducted to identify hard bottom presence and delineate hard bottom that was identified in and near several borrow areas. Hard-bottom buffers of 500 meters (1,640 ft.) were established for high- and moderate-relief hard bottom and 122 meters (400 ft.) were established for low relief hard bottom.

- EPA recommends in our 2/24/2010 DEIS comment letter that we support the ongoing characterization of potential borrow areas during all 4 seasons in order to determine if there are significant differences in species composition and diversity for each sampling period. The FEIS does not include any information on whether this recommendation will be implemented.

- EPA recommends in our 2/24/2010 DEIS comment letter that the FEIS should cite North Carolina Division of Marine Fisheries (NCDMF) commercial finfish and shellfish updated data. EPA notes that Section 2.04.3 of the FEIS has been updated to include the North Carolina Division of Marine Fisheries (NCDMF) commercial finfish and shellfish updated data from 2009.

- EPA recommends in our 2/24/2010 DEIS comment letter the FEIS should discuss efforts to protect the 937-foot long Surf City Ocean Pier during construction, as it is apparently located within the proposed beach fill area. The FEIS notes that during Planning Engineering and Design (PED) and prior to construction, the Corps "will evaluate potential construction related concerns associated with placement of beach fill within the vicinity of the Surf City Ocean Pier."

- EPA notes in our 2/24/2010 DEIS comment letter that the DEIS has a section reporting on the Administration's position on funding of coastal storm damage reduction projects. As this report was under development in 2008, we requested this be clarified (e.g., the current Administration?). We understand that the Office of Management and Budget (OMB) advises that "while the Water Resources Development Act of 1999 (WRDA 99) changed the cost-sharing formula for the long-term sand renourishment component of certain future shore protection projects," these changes did not go far enough considering the long-term cost of most of these projects. Further, because



WRDA 99 delayed the effect of the change in cost sharing for up to a decade or more, it reportedly “did not address current constraints on Federal spending,” and therefore the Administration intends to work with Congress to address these problems. However, EPA understands that until these issues are satisfactorily resolved, there will be no authorization of new shore protection projects “that involve significant long-term Federal investments beyond the initial construction of these projects, and will give new shore protection projects that are already authorized low priority for funding.” EPA notes that language regarding the “Administration’s position” has been removed from the FEIS. EPA also notes the FEIS shows that Project Authorization under WRDA is projected for December 2010. Please keep us informed when this occurs.

➤ EPA recommends in our 2/24/2010 DEIS comment letter that finalized mitigation measures should be presented in the FEIS, to include specific measures recommended by U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) for protection of all threatened and endangered species. EPA recommended that the finalized mitigation plan should include specific finalized protocols to be employed should any sea turtles be encountered during the dredging activity. EPA notes that the FEIS concurs with our recommendation, and that FEIS Appendix T states that “all planning considerations and final mitigation measures recommended by the Corps and other state and federal resource agencies, including measures recommended by the USFWS and NMFS for protection of threatened and endangered species, have been included in Table 7.1 and Section 10.06.1 of the main report as well as Section 4.00 of Appendix I.” EPA notes that this should read Table 7.2 (“Project Commitments”), not Table 7.1 (“Summary of total costs and net benefits used for the selection of the project renourishment interval”). Finally, EPA recommends that the development of specific monitoring plans (i.e. hard bottom sedimentation monitoring and benthic invertebrate monitoring), as identified in the list of commitments to reduce environmental impacts, be coordinated with our agency, as well as other state and federal resource agencies prior to implementation.

Thank you for the opportunity to provide comments on this final report. We appreciate the responses in the FEIS to our concerns about the project’s impacts on marine and threatened and endangered resources, and we recommend that any remaining issues should be addressed in the ROD. If you wish to discuss these comments or have any other questions, please contact me at (404) 562-9611 ([mueller.heinz@epa.gov](mailto:mueller.heinz@epa.gov)) or Paul Gagliano, P.E., of my staff at (404) 562-9373 ([gagliano.paul@epa.gov](mailto:gagliano.paul@epa.gov)).

Sincerely,



Heinz J. Mueller, Chief  
NEPA Program Office  
Office of Policy and Management

Attachment:

EPA Comments (3/5/2010) on the Final Environmental Impact Statement (FEIS) for the Relocation of New River Inlet Ebb Tide Channel Between North Topsail Beach and Onslow Beach, and the Placement of the Dredged Material Along the Ocean Shoreline of North Topsail Beach in Onslow County, NC;  
CEQ Number: 20100025; ERP Number: COE-E30043-NC

cc Doug Piatkowski  
U.S. Army Corps of Engineers  
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Patricia (Trish) Bee  
Program Analyst  
HQ - U.S. Army Corps of Engineers  
Office of Water Project Review



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

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March 5, 2010

Mr. Mickey Sugg  
Project Manager  
Wilmington Regulatory Field Office  
U.S. Army COE of Engineers  
Post Office Box 1890  
Wilmington, North Carolina 28402-1890

**Subject: Comments on the Final Environmental Impact Statement (FEIS) for the Relocation of New River Inlet Ebb Tide Channel Between North Topsail Beach and Onslow Beach, and the Placement of the Dredged Material Along the Ocean Shoreline of North Topsail Beach in Onslow County, NC; CEQ Number: 20100025; ERP Number: COE-E30043-NC**

Dear Mr. Sugg:

Pursuant to Section 309 of the Clean Air Act (CAA) and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA) Region 4 has reviewed the "Final Environmental Impact Statement (FEIS) for the Relocation of New River Inlet Ebb Tide Channel Between North Topsail Beach and Onslow Beach, and the Placement of the Dredged Material Along the Ocean Shoreline of North Topsail Beach in Onslow County, NC," which EPA received on February 11, 2010. The FEIS report was issued by the Wilmington District of the United States Army Corps of Engineers (COE), and was intended to comply with the National Environmental Policy Act (NEPA). EPA previously commented by letter dated February 11, 2008 to Colonel Pulliam, Commander of the Wilmington District, on the Draft Environmental Impact Statement (DEIS) for this project. The public commenting period on the FEIS will reportedly end on March 1, 2010.

EPA understands that this FEIS was developed in conjunction with the Town of North Topsail Beach's request for Department of the Army authorization, pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act, to "protect residential homes and town infrastructures by nourishing approximately 11.1 miles of beachfront via repositioning the New River Inlet channel, implementing an inlet management plan to control the positioning of the new inlet channel, and utilizing an offshore borrow area." The new channel will be centrally located and the proposal will be to maintain that position, which "essentially will be located perpendicular to the adjacent shorelines of North Topsail Beach and Onslow Beach." The proposed sources of the material for the beach nourishment will come from the repositioning of the inlet and an identified offshore borrow area. The projected amount of material needed to initially nourish the oceanfront shoreline is approximately 3.11 million cubic yards. The placement of beach fill along the Town's shoreline would result in the initial widening of

the beach by 50 to 100 feet. The widened beach is to be maintained through a program of periodic beach nourishment events with the material extracted from the maintenance of the newly relocated channel. All work will reportedly be accomplished using a hydraulic cutterhead dredge. The proposed project construction will be conducted "in a five phase approach to correspond with the Town's anticipated annual generation of funds."

The ocean shoreline of the Town of North Topsail Beach measures approximately 11.1 miles along the northern end of Topsail Island, with approximately 7.25 miles of the shoreline contained within the project area except for two small areas located within the Coastal Barrier Resource System (CBRS). Those areas within the CBRS are banned by law from receiving federal funds for use on projects that would encourage development. The channel through New River Inlet has been maintained by the COE for commercial and recreational boating interest for over 55 years, and the COE is authorized by law to maintain the navigation channel in the inlet "to a depth of 6 feet mean low water (mlw) over a width of 90 feet, following the channel thalweg."

The Town of North Topsail Beach has proposed to fund the nourishment of the oceanfront shoreline and reposition New River Inlet channel as a means "to address a severe erosion problem in order to preserve the Town's tax base, protect its infrastructure, and maintain its tourist oriented economy." EPA notes that the entire stretch of the Town's shoreline has experienced a considerable amount of erosion over the last 20 years due primarily to the impact of numerous tropical storms and hurricanes during the mid to late 1990's and due to impacts of the shifting of the main ebb channel in New River Inlet. The Town believes that the shoreline erosion and residual effects of the storms have left North Topsail Beach in "an extremely vulnerable position with regard to its ocean front development and infrastructure," and the community has estimated that "over \$250 million in property tax value as well as roads, water and sewer lines, and other utilities are at risk."

EPA notes that the FEIS' stated purpose and need for this project includes eight (8) elements:

- (1) Long-term stabilization of the oceanfront shoreline located immediately south of New River Inlet;
- (2) Providing short-term protection to 31 imminently threatened residential structures over the next five years;
- (3) Providing long-term protection to the Town's infrastructure and approximately 1,200 homes;
- (4) Reducing or mitigating for property damage associated with shoreline erosion along 11.1 miles of oceanfront shoreline of North Topsail Beach;
- (5) Improving recreational opportunities along the Town's oceanfront shoreline;
- (6) Ensuring all material utilized for shore protection is beach compatible;
- (7) Maintaining the Town's tax base by protecting existing development and infrastructure on the oceanfront shoreline of North Topsail Beach;
- (8) Balancing the needs of the human environment by minimizing and avoiding adverse effects to natural resources.

In “Appendix A, Subpart 4: Response to Comments” of the FEIS, the COE responds to the 31 comments on the DEIS that our agency provided by letter on February 22, 2008. The following are our comments and the remaining issues that EPA has identified as continuing concerns:

- The FEIS states that impacts of historic rates of rise in sea level “are implicitly included in the historic shoreline change data used to formulate the shoreline and inlet management plan for North Topsail Beach. The historic rate of rise in sea level applicable to the project area is 1.25 feet per century.” The reference for the COE’s projected 1.25 feet per century rise in sea level should be provided with this comment.
- Council on Environmental Quality (CEQ) regulations (40 CFR 1502.14(a)) require that an EIS is to “rigorously explore and objectively evaluate all reasonable alternatives” for a proposed action. The regulations (40 CFR 1502.14(b)) further require that substantial treatment be made of each alternative considered in detail, including the proposed action. EPA previously commented on the seven (7) alternatives presented in the DEIS including the No Action alternative. Because of the lengthy duration of the activities, it was unclear to our agency whether the COE has latitude in its authorizations or permitting of the project. EPA was concerned that this would become “an all or nothing approval of the project rather than a provision for interim mid-course review at an appropriate juncture.” The FEIS states that it is anticipated that the record of decision (ROD) as determined by the COE “will include result in an appropriate permit including relevant permit conditions.” Please provide a clarification on what the ROD will include.
- EPA previously commented on the Alternative 7 presented in the DEIS, which involves the construction of a terminal groin on the north end of North Topsail. This alternative was apparently eliminated because it is inconsistent with the State’s coastal policies. Our agency commented that the COE should have considered other more innovative structural options that might be found suitable, including temporary subaqueous structures or wave baffles to modify the hydrodynamics and sand movement, or methods to lessen the wave energy at the eroded beach areas. The FEIS states that “hardened structures, including terminal groins, are currently illegal within the State of North Carolina.” The COE should include the relevant citation from the state code.
- EPA previously suggested an investigation of whether remedial action on Onslow Beach would offer a long-term benefit to North Topsail Beach, as Onslow appears to provide better habitat quality than does North Topsail. The data presented in the DEIS indicated substantially greater erosion along Onslow Beach, with a trend towards an increasing rate of beach loss. The FEIS states that the U.S. Marine Corps (USMC), which controls Onslow Beach, “was a participant in the Project Delivery Team process and is fully aware of the potential impacts of the project on Onslow Beach.” During the initial stages of the plan formulation process the plan reportedly included the placement of mitigation beach fill on the southern end of Onslow Beach to counter the predicted impacts, but the USMC “was not in favor of nourishing Onslow Beach as that activity was deemed to potentially have

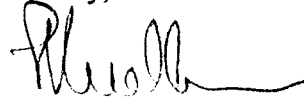
a negative impact on piping plover habitat, namely, an overwash area located on the south end of the island.” Please provide a reference (and include) any communications from the USMC to the COE on this issue.

- The FEIS reports that the identified borrow source lies outside areas preliminary identified by the COE for the federal storm damage reduction project being evaluated for the southern end of North Topsail Beach and the town of Surf City which lies south of North Topsail Beach. Please provide a reference and include all copies of the most recent communication(s) with state and federal resource agencies regarding the selected offshore borrow area, which will reportedly eliminate adverse impacts on the offshore hardbottom resources.
- As mentioned previously, EPA is also currently reviewing the EIS developed for the adjacent project known as the “Draft Integrated Feasibility Report and Environmental Impact Statement for Coastal Storm Damage Reduction for Surf City and North Topsail Beach, North Carolina.” This EIS evaluates coastal storm damage reductions for the Towns of Surf City and North Topsail Beach, NC, and then develops “the most suitable plan of damage reduction for the present and future conditions” for the selected 50-year period of analysis. The primary study area includes the towns of Surf City and North Topsail Beach and the associated nearby borrow sites. It describes a tentatively selected NED Plan that consists of a sand dune system constructed to an elevation of 15 feet above NGVD, fronted by a 50-foot wide beach berm constructed to an elevation of 7 feet above NGVD, with the berm and dune extending along a reach of 52,150 feet in length (about 10 miles). EPA recommends careful coordination to ensure that there are no conflicts between the federal and non-federal projects, either on the shoreline or in the borrow areas. The Draft Integrated Feasibility Report and Environmental Impact Statement states that in the event that the non-federal project is not in place when the federal project begins, then the northern 2,000 feet of the dune and berm system will be replaced with a transition section.
- The FEIS states that “in the absence of maintenance dredging, controlling depths over the outer edge of the ebb tide delta of New River Inlet would likely vary between 2 and 4 feet below MLW depending on antecedent tide and wave conditions.” Please provide a citation or reference with this statement.
- To avoid conflicts, the project should be coordinated with monitoring efforts led by the North Carolina Recreational Water Quality Program (NCRWQ), which regularly tests these coastal waters in order to protect public health by monitoring and notifying the public when bacteriological standards for safe bodily contact are exceeded. Also, the project should be coordinated with the North Carolina Department of Environmental and Natural Resources, Division of Environmental Health, Shellfish Sanitation Section, which is also continually monitoring and classifying these coastal waters as to their suitability for shellfish harvesting for human consumption.
- Finally, CEQ regulations (40 CFR 1502.15) require an EIS to describe the environment of the areas to be affected (or created) by the alternatives under consideration. The data and analysis in the FEIS were found to be commensurate with the significance of the impacts, although EPA still has some general concerns about the potential impacts from dredging on marine threatened and

endangered resources, particularly if plans change and hopper dredges are eventually used. At present all work is tentatively planned to be accomplished using a hydraulic cutterhead dredge.

Thank you for the opportunity to provide comments on this FEIS. EPA rates this FEIS as EC-2, we have some environmental concerns and have requested additional information. If you wish to discuss these comments or have any other questions, please contact me at (404) 562-9611 ([mueller.heinz@epa.gov](mailto:mueller.heinz@epa.gov)) or Paul Gagliano, P.E., of my staff at (404) 562-9373 ([gagliano.paul@epa.gov](mailto:gagliano.paul@epa.gov)).

Sincerely,

A handwritten signature in black ink, appearing to read 'H. Mueller', with a long horizontal flourish extending to the right.

Heinz J. Mueller, Chief  
NEPA Program Office  
Office of Policy and Management